

OPTIMIZED CORRECTION OF WAFER THERMAL DEFORMATIONS IN A LITHOGRAPHIC PROCESS

ABSTRACT

A method and apparatus of correcting thermally-induced field deformations of a lithographically exposed substrate, is presented herein. In one embodiment, the method includes exposing a pattern onto a plurality of fields of a substrate in accordance with pre-specified exposure information and measuring attributes of the fields to assess deformation of the fields induced by thermal effects of the exposing process. The method further includes determining corrective information based on the measured attributes, and adjusting the pre-specified exposure information, based on the corrective information, to compensate for the thermally-induced field deformations.

Other embodiments include the use of predictive models to predict thermally-induced effects on the fields and thermographic imaging to determine temperature variations across a substrate.